



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB1998-0091

December 02, 1998

Don Ostby
Forest Supervisor
Umpqua National Forest
P.O. Box 1008
2900 Stewart Parkway
Roseburg, Oregon 97470

Re: Section 7 consultation on actions affecting Umpqua River cutthroat trout and Oregon Coast coho salmon

Dear Mr. Ostby:

This responds to requests for consultation on actions that you feel are "likely to adversely affect" (LAA) Umpqua River cutthroat trout (UR cutthroat). In an August 25, 1998 letter, you requested that Endangered Species Act (ESA) consultation be completed on the proposed Withrow timber sale for which the Umpqua National Forest (UNF) had initiated consultation in a March 24, 1998 letter. In a similar letters, dated September 17, October 6, and October 22, 1998, you requested that ESA consultation be completed on the proposed Fawn Salvage and Felix timber sales (September 17); Wildcat and Ike timber sales, and an Emergency Repair of Federally-Owned (ERFO) road repair project (October 6); and Zanita Restoration project (October 22) for which the UNF had also initiated consultation on March 24, 1998. Consultation had not been completed on the LAA actions described in the March 24 letter because of the reorganization of consultation procedures that has occurred in response to Judge Rothstein's April 28, 1998 ruling on several ESA consultations in the Umpqua River basin.

Your August 25, September 17, October 6, and October 22 submissions are intended to supplement the Biological Assessment (BA) on these actions provided with your March 24 letter, and you believe that your submissions on these actions respond to the perceived shortcomings identified in the litigation. The supplemented BAs and other information you provided describe the environmental baseline and the effects of the seven actions. We will address all seven of these LAA actions in this letter, the purpose of which is to document our biological opinion (BO) that the proposed actions are not likely to jeopardize the continued existence of the potentially affected anadromous salmonid species listed under the ESA, as explained below. This consultation on UNF actions is conducted under section 7(a) (2) of the ESA and its implementing regulations, 50 CFR 402.



The UR cutthroat (*Oncorhynchus clarki clarki*) was listed as endangered under the ESA by the NMFS on August 9, 1996 (61 FR 41514). Critical habitat for this species was designated on January 9, 1998 (63 FR 1388). The OC coho salmon (*O. kisutch*) and OC steelhead trout (*O. mykiss*) Evolutionarily Significant Units (ESUs) were proposed as threatened under the ESA by NMFS on July 25, 1995 (60 FR 38011) and August 9, 1996 (61 FR 41541), respectively. The OC coho and OC steelhead ESUs were reclassified as candidates for listing under the ESA by NMFS on May 6, 1997 (62 FR 24588) and March 19, 1998 (63 FR 13347) respectively, but the OC coho was subsequently listed as threatened on August 10, 1998 (63 FR 42587). Because of the OC coho listing, we have considered your LAA determination for this species simultaneously along with UR cutthroat in this consultation. This is because the NMFS has adopted a habitat-based “jeopardy” analysis (“Biological requirements and status...”[NMFS 1997d], “Application of Endangered Species Act standards to...”[NMFS 1997a] and the NMFS Biological Opinion and Conference Opinion on continued implementation of Land and Resource Management Plans of several National Forests and the Resource Management Plans of several BLM Districts [hereafter referred to as the LRMP/RMP Opinion] dated March 18, 1997 [NMFS 1997b]), and OC coho habitat is completely overlapped by that of UR cutthroat in these proposed actions.

UNF personnel made the effects determinations in the BA following procedures described in NMFS (1997a, 1997b, and 1997d). The effects of the individual actions proposed in the BAs were evaluated by UNF biologists at the project scale using criteria based upon the biological requirements of UR cutthroat and other potentially affected anadromous salmonids and the Aquatic Conservation Strategy (ACS) objectives of the Northwest Forest Plan (NFP, USDA and USDI 1994). The UNF biologists also evaluated the likely effects of the proposed actions on the watershed scale and in the long-term, in the context of watershed processes. The Level 1 streamlined consultation team for the UNF has defined “long-term” for ESA consultation purposes as about a decade, while short-term effects would occur for a lesser period, most typically a few months to a few years. The Level 1 streamlined consultation team for the UNF met on August 7, September 15, and September 21, 1998 to review the UNF’s effect determinations and documentation of ACS consistency for the subject actions. The team concurred on the ACS consistency analyses and ESA effects determinations.

Proposed Actions

The “proposed actions” would occur in the Jackson Creek, Middle South Umpqua, and Upper Cow Creek fifth field hydrologic unit codes (HUCs)¹ of the South Umpqua River, and the Middle North

¹ Stream drainages can be arranged in nested hierarchies, in which a large drainage is composed of smaller drainages. The UNF uses a system in which these drainages are numbered in a computer data base for analytical purposes. The numerical identifier of a particular drainage in this data base (which is located in a specific column or “field” in the data base) is called its hydrologic unit code, or HUC. This HUC increases with decreasing drainage area, thus a fourth field HUC (such as the South Umpqua River) is composed of several fifth field HUCs (such as Jackson Creek, Upper Cow Creek, etc.), and so on. The Northwest Forest Plan determined that the scale for Watershed Analyses should be 20 to 200 square miles, which often corresponds to a fifth field HUC.

Umpqua and Little River fifth field HUCs of the North Umpqua River, in Douglas County, Oregon. Specifically, in the Jackson Creek fifth field HUC (a fifth field HUC will be considered a “watershed” for consultation purposes), the Fawn Salvage timber sale (Fawn) is proposed for the Pipestone and Three Cabin sixth field HUCs; also, the Zanita restoration projects (Zanita) are proposed for the Upper Straight Creek sixth field HUC in the Middle South Umpqua watershed. Several actions are proposed for the Upper Cow Creek watershed, including the Wildcat timber sale (Wildcat, proposed for the East Fork Cow Creek sixth field HUC), the Ike timber sale (Ike, proposed for the Beaver Creek, Upper Cow Creek 6, Devil Creek, French Creek, Upper Cow Creek 2, and Maple-Charlie Creeks sixth field HUCs), and Site 2-31-97 ERFO road damage repair project (ERFO, proposed for the East Fork Cow Creek sixth field HUC. In addition, the Felix timber sale (Felix) is proposed for the Cougar Creek sixth field HUC of the Middle North Umpqua watershed, and the Withrow timber sale (Withrow) is proposed for the Upper Cavitt and Cavitt sixth field HUCs of the Little River watersheds. Environmental Assessments (EAs), Biological Evaluations (BEs) and other documents (which were appended to the UNF’s BA) have detailed information on each of the actions, but brief summaries are provided below.

Fawn. The UNF proposes to salvage about 140 acres of blown-down timber in the Matrix land allocation in Fawn to reduce fuel loads (and the associated risk of catastrophic fire) and provide fiber for domestic markets and the local economy. None of the salvage is proposed to occur in riparian reserves (RRs) of the non-fishbearing streams within the units. A few green trees would also be cut to facilitate yarding and to remove safety hazards. Eighty-nine acres of the salvage would be partial (one-end) suspension cable-yarded, while the remainder would be helicopter-yarded. No new roads would be constructed, but approximately 3 miles of existing road would be resurfaced, and two drain dips would be installed on another road. Additionally, 1.98 miles of road would be inactivated and a pile of waste material (dirt) adjacent to Devils Knob Creek would be removed. Road inactivation consists of closing roads, pulling culverts, water barring at frequent intervals, and otherwise reducing the risk of road erosion. About 45 acres of slash from the harvest would be hand-piled and burned.

Zanita. The UNF proposes to reduce the influence of roads in the Upper Straight Creek sixth field HUC in Zanita. To accomplish these objectives, the UNF proposes to obliterate approximately 13.14 miles of road, inactivate 2.3 miles of road, and upgrade approximately 8.63 miles of road. Obliteration includes the following measures (which would not leave a driveable surface): removing culverts and reshaping stream channel crossings, ripping and vegetatively restoring road surfaces, and recontouring the road prism to natural hillslopes. Inactivation is described in the previous paragraph, while upgrading consists of repairing and resizing culverts to pass 100-year flood events, adding additional drainage structures to reduce stream channel extension, and reshaping and resurfacing (when necessary). About 0.5 miles of road obliteration is proposed in RR; the in-water work window (July 1 through September 15) prescribed by the Oregon Department of Fish and Wildlife would be observed for any activities within stream channels.

Wildcat. In Wildcat, the UNF proposes to commercially thin 47 acres; 36 of the acres would occur in the Matrix land allocation and 11 acres would occur in Late Successional Reserve (LSR). The treatment, thinning from below, is designed to accelerate the achievement of late successional characteristics by enhancing the growth of the remaining trees. Wildcat should also improve stand vigor, species diversity, and structural diversity. Yarding and hauling of harvested timber would be accomplished by partial (one-end) uphill suspension cable-yarding. Slash from the sale units would be hand-piled and burned. About 0.18 miles of new temporary road and about 0.18 miles of new permanent road would be constructed for the sale, while 12.83 miles of existing road would be reconstructed (bladed and shaped), 1.74 miles of existing roads would be inactivated/stormproofed, and 0.35 miles of existing road would be obliterated. In addition, 0.09 miles of new permanent road would be inactivated. A quarry (on Matrix land) would be expanded by 2 acres to provide material for Wildcat and future road treatments. Some trees would be removed during quarry expansion. None of the thinning, new road construction, or quarry expansion would occur within RR.

Ike. The UNF proposes to harvest timber from about 177 Matrix acres in Ike, using the commercial thin, pine health, and understory removal prescriptions in all units. Commercial thinning from below would occur in near-pure Douglas-fir stands, while the pine health prescription would remove competing trees around individual ponderosa and sugar pine. Overstocked understories of shade tolerant and fire intolerant species (primarily white fir) would be harvested in understory removal. These treatments are intended to partially restore the stands to the historic, pre-fire suppression condition. Follow-up slash treatment would be predominantly hand-piling and burning, with underburning in one unit. More than three-quarters of the yarding would be by partial-suspension cable, with a minority of the timber yarded by ground-skidding equipment equipped with a shovel or integral arch. About 0.47 miles of semi-permanent road would be constructed, while about 1.78 miles of existing road would be reconstructed, about 12.47 miles of existing road would be upgraded, 1.88 of existing road would be inactivated, and 1.88 miles of existing road would be obliterated. None of the timber harvest or new road construction would occur within RR.

ERFO. In the ERFO project, the UNF proposes to repair one site on the FS 3200 road. This road was damaged by a landslide which removed about three-quarters of the roadbed for about 150 linear feet. This road section is within an LSR, on a ridgetop remote from any RR. The proposed repair work would involve moving the alignment of the subject road section a full road-width into the slope, with a new roadcut. The damaged existing roadbed would be obliterated and unstable fills would be removed. The work would require the installation of two new drainage structures, and removal of two to three trees.

Felix. The UNF proposes to partially harvest from 40 to 85% of tree basal area in 12 units totaling 330 Matrix acres in Felix. Of this total, 77 acres would be a moderately thinned (58-68% of canopy cover retained), 181 acres would be a heavy thin (32-43% of canopy cover retained), and 72 acres would be regeneration harvested (13-14% of canopy cover retained). The purpose of the sale is to provide timber for local mills and to provide alternative volume for a sale which was canceled on the

Siuslaw NF. Yarding and hauling of harvested timber would be accomplished by partial (one-end) uphill suspension cable-yarding for about 45% of the acreage and by helicopter for the remaining 55%. The sale units would be underburned to remove slash and diminish the potential for catastrophic wildfire. No new road would be constructed, but about 9.5 miles of existing roads would be stormproofed and 7.8 miles of existing road would be decommissioned. Stormproofing is similar to road upgrading (described above) while decommissioning is similar to obliteration and would eliminate the hydrologic and erosional effects of the decommissioned road. Two helicopter landings would also be constructed or used. None of the harvest or helicopter landings proposed would occur within RR.

Withrow. The UNF proposes to commercially thin and underburn 586 acres of the Adaptive Management Area (AMA) land designation in Withrow, to commercially thin and handpile 115 AMA acres, and to underburn (without timber harvest) another 365 acres of the Little River AMA. In conjunction with these activities, the UNF proposes to decommission about 12.7 miles of road and to stormproof about 21.9 miles of road. The purpose of Withrow is to lower the risk of catastrophic fire, to provide timber volume for the local economy, and to partially restore the hydrologic regime in the Cavitt Creek drainage. Of the 701 acres proposed for thinning, about 666 acres would receive a moderate treatment (canopy closure reduced to about 72-74%) and about 35 acres would receive a heavy treatment (canopy closure reduced to about 52-57%). The majority of the thinning would be proportional, meaning that both understory and overstory trees would be harvested. About 74% of the harvested acres would be partial-suspension cable-yarded, with the remaining acreage being helicopter-yarded. While no harvest is proposed in RR in Withrow, the UNF has proposed to underburn approximately 231 RR acres. Underburning has the potential to cause some tree mortality.

Biological Information and Critical Habitat

The biological requirements (including the elements of critical habitat) of each of the ESUs are discussed in the LRMP/RMP Opinion, NMFS (1997b) and in NMFS (1997c). Environmental baseline conditions in the Umpqua Basin are discussed in Johnson et al. (1994), pages 2-7 of NMFS (1997c) and pages 13-14 of the LRMP/RMP Opinion. Cumulative effects as defined under 50 CFR 402.02 are discussed for the Umpqua Basin on pages 40-43 of the NMFS LRMP/RMP Opinion. These respective analyses are incorporated herein by this reference. NMFS is not aware of any newly available information that would materially change these previous analyses of biological requirements, environmental baseline or cumulative effects for the purpose of this Opinion. Some general biological information is provided below.

UR cutthroat inhabit the Umpqua River Basin of southwest Oregon. The Evolutionarily Significant Unit (ESU) consists of resident, potamodromous, and anadromous life histories. Individuals of all three forms have the potential to inhabit the Jackson Creek, Upper Cow Creek, Middle South Umpqua, Middle North Umpqua, and Little River watersheds. UR cutthroat are known to be year-around inhabitants (using rearing, feeding, spawning, and incubation habitat) of all of the subject watersheds and the watersheds are likely used as migration corridors by both adults and juveniles of the ESU.

Historically, adult anadromous cutthroat trout passed Winchester Dam (on the North Umpqua River) predominantly from late June through November, with peaks in mid-July and mid-October, while juvenile outmigration is thought to occur chiefly from March through October (Johnson et al. 1994).

OC coho are an anadromous species which typically have a three-year life-cycle and are found in all five subject watersheds. Adults spawn in the late fall and winter, with fry emergence occurring the following spring. Juvenile coho salmon rear for about a year in natal streams and then outmigrate to the ocean as smolts in the spring. Some male coho return to freshwater to spawn the fall and winter of the same year as their smolt migration, but the majority of adult OC coho do not return to spawn until having spent about 18 months in the ocean. Thus, an active OC coho stream would be used for some life-stage (as rearing, feeding, spawning, and incubation habitat) year-round.

The UNF's Watershed Analysis (WA, TRD [1995a]) for Jackson Creek lists approximately 70 miles of stream in that watershed inhabited by anadromous or resident salmonids (including OC coho and UR cutthroat). Prior to the construction of Galesville Dam, approximately 18 miles of the UNF-managed portion of the Upper Cow Creek watershed supported anadromous fish runs and another 19 miles supported resident salmonids (Cow Creek WA, TRD [1995b]). In the Little River WA (Little River WA, NURD and BLM, 1995), it is documented that the Little River watershed as a whole provides about 48 miles of habitat for anadromous fish and another 70 miles of resident fish habitat. Similar estimates were not available for the Middle South Umpqua and Middle North Umpqua watersheds, but they likely provide dozens of miles of habitat for anadromous and resident salmonids.

Although general information about the populations of UR cutthroat and OC coho within the Jackson, Middle South Umpqua, Upper Cow, Middle North Umpqua, and Little River watersheds is available (e.g., those streams likely inhabited, see above), specific information on the size and health of anadromous fish populations in the Umpqua Basin is often lacking or incomplete. Because of the general paucity of the type of knowledge which would allow the UNF and NMFS to assess the relative health of anadromous salmonid populations on a stream or watershed scale, and the fact that all fish species, populations, and individuals depend on adequate habitat, the NMFS uses a habitat-based system in ESA consultation on land-management activities (NMFS 1997d). The NMFS has applied the concept of Properly Functioning Condition (PFC) to assess the quality of the habitat that fish need to survive and recover. This concept is discussed in the next section.

Site-specific environmental baseline descriptions and effects determinations were made by UNF personnel for each of the proposed timber sales. This information is found in the project-level (sixth field HUC) Matrices of Pathways and Indicators (MPIs) which were included in the BA. In addition, watershed-level information on UR cutthroat and OC coho habitat is provided in the fifth field MPIs also included in the BA. The NMFS concurred with these project and watershed-scale environmental baseline descriptions and effects determinations in the streamlined consultation process and NMFS considered them in addition to the broad scale analysis conducted for the LRMP/RMP Opinion described above.

Evaluation of Proposed Actions

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by the consultation regulations (50 C.F.R. 402). NMFS (1997a) describes how NMFS applies the ESA jeopardy and destruction/adverse modification of critical habitat standards to consultations for Federal land management actions in the Umpqua River basin.

As described in NMFS (1997a), the first steps in applying the ESA jeopardy standards are to define the biological requirements of UR cutthroat and OC coho and to describe the species' current status as reflected by the environmental baseline. In the next steps, NMFS' jeopardy analysis considers how the proposed actions are expected to directly and indirectly affect specific environmental factors that define properly functioning aquatic habitat essential for the survival and recovery of the species. This analysis is set within the dual context of the species' biological requirements and the existing conditions under the environmental baseline (defined in NMFS 1997c). The analysis takes into consideration an overall picture of the beneficial and detrimental activities taking place within the action area, which is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.02). If the net effect of the activities is found to jeopardize the listed species, then NMFS must identify any reasonable and prudent alternatives to the proposed action.

Biological Requirements. For this consultation, NMFS finds that the biological requirements of UR cutthroat and OC coho are best expressed in terms of current population status and environmental factors that define properly functioning freshwater aquatic habitat necessary for survival and recovery of the species. The NMFS defines this "properly functioning condition" (PFC) as the state in which all of the individual habitat factors operate together to provide a healthy aquatic ecosystem that meets the biological requirements of the fish species of interest. Individual, measurable habitat factors (or indicators) have been identified (e.g., water temperature, substrate, etc.) and the "properly functioning" values for these indicators have been determined using the best information available. These indicators, when considered together, provide a summary of the conditions necessary to ensure the long-term survival of aquatic species.

The NMFS has assembled a set of these indicators in a form called the Matrix of Pathways and Indicators (MPI, NMFS 1996). The MPI is a table that lists several categories or "pathways" of essential salmonid habitat, such as water quality, instream habitat elements, and flow/hydrology. Under these pathways are quantitative habitat indicators for which ranges of values are identified that correspond to a "properly functioning" condition, an "at risk" condition, and a "not properly functioning" condition. Because these habitat measurements are more readily available than quantitative measurements of biological variables such as incubation success, standing crop, and growth rate, the

NMFS and UNF are able to assess the health of stream reaches or watersheds based on the condition of their component indicators. Such an assessment provides a baseline description of the health of the stream/watershed and also allows the effects of an action (e.g., timber harvest) to be evaluated.

Properly functioning watersheds, where all of the individual factors operate together to provide healthy aquatic ecosystems, are necessary for the survival and recovery of the listed species. It follows, then, that the NMFS has determined that an action which would cause the habitat indicators of a watershed to move to a degraded condition or one which further degrades a “not properly functioning” watershed is also likely to jeopardize the continued existence of the listed species.

In addition to the use of the MPI at the watershed level to assist in making “jeopardy” determinations in Section 7 consultations (especially for land management agencies), the NMFS also uses the MPI at the site or project scale. Assuming that a Federal agency determines that an action is a “may affect,” either informal or formal consultation is required. To assist in this determination, the action agency prepares a project-level MPI. If no “degrades” occur at this scale, then the action is probably not likely to adversely affect individuals of a listed species and an informal Section 7 consultation is appropriate. If the proposed action degrades any of the indicators at this smaller scale (often the sixth or seventh field HUC), then the action is generally considered to be a “likely to adversely affect” and formal consultation must occur.

Current range-wide status of listed species under environmental baseline. NMFS described the current population status of the UR cutthroat in its status review (Johnson et al. 1994) and in the final rule (August 9, 1996, 61 FR 41514). Critical habitat for UR cutthroat was designated by the NMFS on January 9, 1998 (63 FR 1338). NMFS also described the current population status of OC coho in a status review (Weitkamp et al. 1995) and in the final rule (August 10, 1998, 63 FR 42587). The recent range-wide status of both these species is summarized in NMFS (1997c).

Current status of listed species under environmental baseline within the action areas. As noted above, the “action area” includes all areas directly or indirectly affected by the proposed action. The general action areas can be defined as the Jackson, Middle South Umpqua, Upper Cow, Middle North Umpqua, and Little River watersheds.

As noted above, UR cutthroat and OC coho use the action areas as rearing, feeding, spawning, and incubation habitat, as well as a migration corridor. The environmental baseline of the action areas are dominated by conditions rated largely as “not properly functioning” or “at risk” (see watershed MPIs in BA). These conditions are likely primarily the result of past forest management and agricultural practices, in particular, timber harvest/clearing within riparian zones, large-scale clear-cut timber harvest, road construction (especially within riparian zones), and timber yarding in riparian zones and streams.

Indicators particularly at issue in this consultation are those which would likely be degraded by the proposed actions at the project scale, although the NMFS has also reviewed the UNF's "maintain" and "restore" effect determinations. In this case "sediment/turbidity" was determined to be degraded at the project scale by six of the seven actions and "substrate" was determined to be degraded at the project scale by three of the seven actions. "Peak/base flows" and "pool quality" were each determined to be degraded at the project scale by one of the seven actions. On the watershed scale, the environmental baseline for "sediment/turbidity" was listed as "not properly functioning" in four of five watersheds ("at risk" in the fifth), "substrate" was "not properly functioning" in all three of the watersheds where a "degrade" at the project scale would occur, and "peak/base flows" and "pool quality" were listed as "at risk" and "not properly functioning," respectively, in the watersheds where "degrades" are predicted to occur at the project scale as a result of the proposed actions.

Based on the best information available on the current status of UR cutthroat and OC coho (NMFS 1997c), NMFS assumptions given the information available regarding population status, population trends, and genetics (NMFS 1997a), and the relatively poor environmental baseline conditions within the action areas (see MPIs in BA and UR cutthroat and OC coho final listing rules), NMFS finds that the environmental baseline does not currently meet all of the biological requirements for the survival and recovery of the listed species within the action area. Actions that do not retard attainment of properly functioning aquatic conditions when added to the environmental baseline are necessary to meet the needs of the species for survival and recovery.

Analysis of Effects

The effects determinations in this opinion were made using a method for evaluating current aquatic conditions (the environmental baseline) and predicting the effects of the actions on them. This process is described in the document "Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale" (NMFS 1996). This assessment method (in which MPIs are assembled by action agency biologists) was designed for the purpose of providing information in a tabular form for NMFS to determine the effects of actions subject to consultation.

The UNF uses the MPI to make project-level effects determinations: whether an action is "not likely to adversely affect" or "likely to adversely affect" (LAA) the ESA-listed species (in this case, UR cutthroat and OC coho). If any of the indicators is thought to be degraded at the project level by the action, the action is determined to LAA. In turn, if a project was determined to LAA the ESA-listed species, then, based on the "jeopardy" standard delineated in the LRMP/RMP Opinion, the UNF must determine whether the project, when combined with the environmental baseline for the watershed over the long-term, is consistent with the ACS of the NFP. This "consistency" is condensed to a two-part test in the LRMP/RMP Opinion (NMFS 1997a, pg. 14): Is the proposed action in compliance with the standards and guidelines for the relevant land allocation, and does the proposed action meet all pertinent ACS objectives? This determination is made with the assistance of the MPI at the watershed scale.

Project-Level Effects. The UNF-provided MPIs for the effects of actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area for each sixth field HUC affected by the proposed timber sales. The results of the completed checklist for the proposed action provide a basis for determining the effects of the action on the environmental baseline in the project area.

In this consultation, the UNF provided a project-level MPI for each of the proposed actions. In some cases, the UNF prepared only one MPI for several sixth field HUCs that might be affected by a single action. In general, the UNF determined the actions would not degrade indicators at the project level chiefly because of the maintenance/enhancement of the riparian zones.

Fawn. For Fawn, the UNF found that on the project level, the “sediment,” and “substrate” indicators would be degraded as a result of the action and all other indicators would be maintained. The UNF attributes the “degrade” checkmark for “sediment” and “substrate” to a transitory increase in stream sedimentation, due to the short-term cumulative effects of soil disturbance and surface erosion from cable yarding and road inactivation. The NMFS notes that the proposed removal of the pile of waste material from the RR could also cause short-term, localized sedimentation. In Fawn, as well as the other timber sales in this Biological Opinion (BO), RR buffers and/or road construction/maintenance techniques should prevent most (if not all) of the ground-disturbing activities from transmitting substantial amounts of sediment into stream channels. In addition, because Fawn is a salvage sale, no reduction in canopy cover will occur. Because of the presence of the “degrade” checkmarks on the project scale, the UNF determined that Fawn is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effects determination.

Zanita. For Zanita, the UNF found that on the project level, the “sediment” and “substrate” indicators would be degraded, the “drainage network extension” and “road density/location” would be restored, and all other indicators would be maintained as a result of the action. The UNF attributes the “degrade” checkmarks for “sediment” and “substrate” to a transitory increase in stream sedimentation due to road upgrading, inactivation, and obliteration, including culvert replacement and removal. Because of the greater than 50% reduction in road density within the Upper Straight Creek sixth field HUC, the UNF determined that these indicators would be restored. In fact, the proposed action would move these indicators from “not properly functioning” to “at risk” for the subwatershed, therefore the NMFS agrees that the environmental baseline should be modified. Because of the presence of the “degrade” checkmarks on the project scale, however, (caused by possible short-term, localized sedimentation) the UNF determined that Zanita is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effect determination.

Wildcat. The UNF found that on the project level, all but the “sediment” indicator would be maintained as a result of the action, and the effects would be short-term. The UNF attributes the “degrade” checkmark for “sediment” to a transitory increase in stream sedimentation due to effects of soil disturbance and surface erosion from cable-yarding, road activities, and fuel treatment. As with

most of the other thinning harvest prescriptions in this BO, the decrease in canopy cover that would be caused by the proposed harvest is expected to be short-term and not hydrologically significant. This is because the majority of canopy would remain after the treatment and the full canopy should return within 5 to 10 years because of enhanced growth of the remaining trees. During rain-on-snow events, snow in and under the canopy tends to melt less quickly than snow on the ground that is subject to direct contact by rain. Thus, the retention of substantial canopy is likely to slow the runoff of water during rain-on-snow events. Because rain-on-snow events cause many or most peak flows in the UNF, harvest prescriptions which retain the majority of canopy cover are also likely to contribute to the maintenance of peak flow characteristics. Because of the presence of the “degrade” checkmarks on the project scale, the UNF determined that Wildcat is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effects determination.

Ike. For Ike, the UNF found that on the project level, the “sediment,” “substrate,” and “pool quality” indicators would be degraded and all other indicators would be maintained as a result of the action. The UNF attributes the “degrade” checkmark for these indicators to a transitory increase in stream sedimentation due to the short-term cumulative effects of soil disturbance and surface erosion from cable and ground-based yarding, road-related activities, and fuel treatments. As in Wildcat, the harvest prescription is not expected to have hydrologically significant or long-term effects. Because of the presence of the “degrade” checkmarks on the project scale, the UNF determined that Ike is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effects determination.

ERFO. For the Upper Cow Creek ERFO project, the UNF found that on the project level, all indicators would be maintained as a result of the action. This is primarily because of the location of the project, which is remote from RRs and streams. While the most recent materials (dated October 6, 1998) submitted for this proposed action note that an LAA determination was made for this action in a Biological Evaluation dated August 14, 1997, information submitted in the original March 24, 1998 BA for this and other UNF proposed actions documented both “not likely to adversely affect” (NLAA) and LAA determinations. At the time of the original submission of this action for consultation, the proposed ERFO project was one of three which were bundled as one action, and an LAA determination may have been appropriate. The LAA determination was inadvertently transferred to the single disaggregated ERFO project at issue in this consultation, but the UNF believes that a NLAA determination is correct (personal communication, Ken Phippen, fishery biologist, Tiller R.D., 11/30/98). Based on the maintenance of all of the indicators in the project level MPI, we believe that an NLAA determination is appropriate for this proposed ERFO project and concur with the UNF’s March 24, 1998 NLAA determination.

Felix. The UNF found that on the project level, the “sediment” and “peak/base flows” indicators would be degraded, the “drainage network extension,” “road density/location,” and “landslide rates” indicators would be restored, and the remaining indicators would be maintained as a result of the action. The UNF attributes the “degrade” checkmark for “sediment” to a transitory increase in stream

sedimentation due to effects of soil disturbance and surface erosion from cable-yarding and road activities. While the decrease in canopy cover on approximately a quarter of the acreage proposed for harvest would be less than 50% (and is expected to be short-term and not hydrologically significant, see discussion under Wildcat), the majority of the proposed harvest would result in a more substantial reduction in canopy cover (from 13 to 43% retention). The likely hydrologic effects (“peak/base flow”) of heavy thinning and regeneration harvest is provided in the “Watershed-Level Effects” section, below.

The helicopter landing sites would each occur in previously cleared and hardened areas remote from RR, and further preparations and use of the sites should have little or no effect on canopy cover or other factors relevant to riparian or in-stream habitat.

Regarding the “restore” determinations, while the road treatments are certainly restorative in nature, it does not appear that the proposed changes would move the “at risk” baselines for “drainage network extension” or “road density/location” to the “properly functioning” condition. For the “landslide rates” indicator, while the road decommissioning and stormproofing would likely reduce the threat of landslide in the sixth field HUC, the UNF already believes that the indicator is properly functioning. Because of the presence of the “degrade” checkmarks on the project scale, the UNF determined that Felix is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effects determination.

Withdraw. The UNF found that on the project level, the “sediment/turbidity” indicator would be degraded, the “drainage network” and “road density and location” indicators would be restored, and the remaining indicators would be maintained as a result of this action. The UNF attributes the “degrade” checkmark for “sediment/turbidity” to a transitory increase in stream sedimentation, as a result of effects of soil disturbance and surface erosion from cable-yarding, road activities, and fuel treatments. About 5% of the proposed timber harvest would be a heavy thin (canopy closure reduced to about 55%). The balance of the proposed harvest stands would be a moderate thin (canopy closure reduced to about 73%). While the moderately-thinned acreage should regain full canopy cover in five to ten years (see discussion under Wildcat), it is likely that the heavily-thinned tree stands would require a somewhat longer period to fully regain previous canopy cover and hydrologic characteristics. Hydrologic recovery of the heavily-thinned units would be slower than that of more moderately-thinned areas, but these units are small compared to the sixth-field HUCs and watersheds that they may affect, and should not retard recovery of Cavitt Creek or the Little River (see “Watershed-Level effects, below).

Regarding the “restore” determinations, while the road treatments are certainly restorative in nature, it does not appear that the changes proposed in Withdraw would move the “not properly functioning” baselines for “drainage network extension” or “road density/location” to the “at risk” condition for either the Cavitt or Upper Cavitt sixth field HUC. Because of the presence of the “degrade” checkmarks on the project scale, the UNF determined that Withdraw is likely to adversely affect UR cutthroat trout. The NMFS concurs with the UNF on this project-level effects determination.

Watershed-Level Effects. In the BA, the UNF provided watershed-scale MPIs and ACS Consistency reviews for each of the seven actions. The watershed-scale MPIs evaluate the effects of the proposed action on habitat indicators in the fifth field HUC relative to the long-term environmental baseline.

While many actions, including those that may be beneficial in the long-term, have short-term, small-scale adverse effects, only those actions which would adversely affect the environmental baseline over an entire watershed over a long period would receive a “degrade” checkmark. It is important to realize that both active and passive restoration activities contribute to the environmental baseline. In particular, the passive restoration that will occur over the long-term (at least a decade, see above), especially in RRs, is a principal component of the watershed recovery aspect of the NFP. The role of RRs, LSRs, etc., in restoration of watersheds is described in the NFP ROD (USDA and USDI 1994) and in the LRMP/RMP Opinion (NMFS 1997b).

The ACS consistency reviews included a description of how the proposed projects compared to the applicable NFP standards and guidelines (S&Gs) for the listed ESUs and how the proposed projects complied with the nine ACS objectives for those ESUs. Because there is strong correspondence between the habitat indicators of the MPI and the ACS objectives, it is likely that if none of the habitat indicators in the watershed level MPI is degraded by an action, then compliance with ACS objectives for the ESUs is also achieved. In the descriptions below, only those MPI habitat indicators which were determined to “degrade” at the sixth field HUC are discussed. Similarly, the S&Gs and ACS objectives which may be of issue are noted. Whether discussed below or not, information on all of the habitat indicators, relevant S&Gs, and ACS objectives was provided in the UNF’s BA and was considered in our analysis.

Jackson Creek watershed. Fawn is proposed for the Jackson Creek watershed, which, as part of the Upper South Umpqua River basin, is a Tier 1 Key Watershed. For this action, the UNF determined that all of the habitat indicators would be maintained at the Jackson Creek watershed scale, despite the project-level “degrades” which were recorded in the Pipestone and Three Cabin sixth field HUCs. As noted under “Project-level effects,” above, the “sediment” and “substrate” indicators were thought to be degraded as a result of harvest and road-related actions. In the long-term and on the watershed scale, however, these “degrades” were not thought to be consequential because of their short-term and highly localized nature. Road repair, in fact, is likely to diminish the adverse effects of roads by preventing or minimizing future landslides and reducing erosion. Inactivation should have even greater beneficial effects to the watershed. In addition, the UNF would slightly decrease active road density in the watershed as a result of Fawn.

As noted above, the action proposed in this watershed (Fawn) is a salvage timber sale. As such, it would not decrease canopy cover or hydrologic recovery in the watershed. During the next ten years, other UNF actions in the Jackson Creek watershed will be proposed, possibly including timber sales, but (according to the UNF’s ACS consistency review and Jackson Creek WA [TRD 1995a]) approximately 60% of the Federal land in the watershed is protected as LSR, Wilderness, or Research Natural Area and a substantial portion of the rest of the watershed is protected as RR. Because more

than two-thirds of the Federal forest land in the watershed (and all of the RR-- the most important portion, from an anadromous fish viewpoint) will be protected from non-restorative activities, future non-restorative activities (such as timber harvest) proposed for Matrix lands should not retard the recovery of the watershed as a whole.

Based on the EA and ACS Consistency Review for Fawn, appears that all of the relevant S&Gs would be observed by the UNF and that compliance with the nine ACS objectives would also be achieved.

Middle South Umpqua watershed. For this watershed, a part of the Upper South Umpqua Tier 1 Key Watershed under the NFP, the UNF has proposed to conduct the Zanita restoration. The UNF determined that all of the habitat indicators would be maintained or restored at the watershed scale, despite the two project-level “degrades” which were recorded in the Upper Straight Creek sixth field HUC. As noted under “Project-level effects,” above, the “sediment” and “substrate” indicators were thought to be degraded as a result of road upgrading, inactivation, and obliteration. Per the project-level discussion of the ERFO project, above, however, these “degrades” are not thought to be consequential in the long-term. In fact, the reduction in active road density and road improvements are beneficial over the long-term.

During the next ten years, other UNF actions in the Middle South Umpqua watershed will be proposed, but (according to information provided by the UNF) 45% of the land in the Middle South Umpqua watershed will be protected as LSR and at least 23% of the remaining land is RR. Therefore, a substantial portion (probably close to two-thirds) of the Federal land (and all of the RR-- the most important portion, from an anadromous fish viewpoint) will be protected from non-restorative activities. Based on the EA and the ACS Consistency Review for Zanita, it appears that all of the relevant S&Gs would be observed by the UNF and that compliance with the nine ACS objectives would be achieved.

Upper Cow Creek watershed. The UNF has proposed Wildcat for the East Fork Cow Creek sixth field HUC; Ike for the Beaver Creek, Upper Cow Creek 6, Devil Creek, French Creek, Upper Cow Creek 2, and Maple-Charlie Creeks sixth field HUCs; and an ERFO project for the East Fork Cow Creek sixth field HUC of the Upper Cow Creek watershed. Upper Cow Creek is not a Tier 1 Key Watershed. The UNF determined, as shown in the MPI provided in the BA, that all of the habitat indicators would be maintained at the watershed scale, despite the project-level “degrades” in all of the sixth field HUCs. As noted under “Project-level effects,” above, the “sediment,” “substrate,” and “pool quality” indicators were thought to be degraded due to harvest, road, and fuel reduction-related actions. In the long-term and on the watershed scale, however, these “degrades” were not thought to be consequential because of their short-term and highly localized nature. In addition, the UNF would slightly decrease active road density in the watershed as a result of the proposed actions.

As noted under the project-level discussion for Wildcat, commercial thinning in Wildcat and Ike should have no long-term effect on canopy cover and therefore, no long-term effect on hydrologic recovery. During the next ten years, other UNF actions in the Upper Cow Creek watershed will be proposed,

but (based on the UNF's Cow Creek Watershed Analysis [TRD 1995b]) approximately 16% of the Federal land in the UNF portion of the watershed is protected as LSR or is Administratively Withdrawn and about 49% of the watershed is protected as RR. Because in excess of 57% of the Federal forest land in the UNF-administered portion of the watershed (and all of the RR-- the most important portion, from an anadromous fish viewpoint) will be protected from non-restorative activities, future non-restorative activities (such as timber harvest) proposed for Matrix lands should not retard the recovery of the watershed as a whole. The remainder of the Federal land in the Upper Cow Creek watershed is administered by the Medford BLM, where all of the 12,466 acres managed by that agency is in LSR (personal communication, Bob Bessey, fishery biologist, Medford BLM, 10/20/98). Thus, approximately 72% of Federal land within the watershed will be protected from degrading activities. In fact, because of the passive improvement of RR, LSR, etc., the watershed should show steady recovery over the long-term. Any active measures to improve watershed function, such as road decommissioning and upgrading, should also help the watershed to recover over time.

Based on the EA and ACS Consistency Review for Wildcat, Ike, and ERFO, it appears that all of the relevant S&Gs would be observed by the UNF and that compliance with the nine ACS objectives would also be achieved.

Middle North Umpqua watershed. Felix is proposed for the Middle North Umpqua watershed, which is a non-Key Watershed under the NFP. For this action, the UNF determined that all of the habitat indicators would be maintained at the watershed scale, despite the project-level "degrades" which were recorded in the Cougar Creek sixth field HUC. As noted under the discussion of the Jackson Creek watershed, above, the "sediment" indicator was thought to be degraded due to harvest and road-related actions such as stormproofing and decommissioning. In the long-term and on the watershed scale, however, this "degrade" was not thought to be consequential because of its short-term and highly localized nature. Proper stormproofing, in fact, is likely to diminish the adverse effects of roads by allowing the drainage design features to work properly. Decommissioning of active roads should be an even more beneficial action.

As noted under the project-level discussion for Felix, moderate commercial thinning should have little long-term effect on canopy cover, and therefore, no long-term effect on hydrologic recovery. The majority of the proposed harvest would be heavy thinning and regeneration, however, and has some potential to affect the "peak/base flow" indicator.

The UNF estimates (in their EA) that the hydrologic recovery percentage (HRP) would be reduced from the existing 85% to 80% in the Cougar Creek sixth field HUC because of harvest, but that the actual impact on peak flows would likely be less because of the relatively gentle slopes of the Cougar Plateau and because any reduction in canopy below 70% was modeled as a clearcut. While the UNF treated thinning harvests in the same manner as clearcuts in their hydrologic model, in actuality the effect of heavy thinning on hydrologic functions is likely to be less. This is because more canopy cover (an important variable in hydrologic calculations) would be present after thinning than after clearcutting, so

modeling of heavy thinning (on approximately 55% of the sale acreage) as clearcutting is an exaggeration of the likely hydrologic response. The regeneration harvest proposed for Felix is likely accurately modeled as clearcut.

In addition, according to the Withrow EA, FS hydrologists generally believe that drainages exceeding 75% HRP will maintain existing hydrologic conditions during rain-on-snow events. Such events are most likely to cause peak flows in the higher elevations of the UNF. As the Cougar Creek sixth field HUC would exceed this level after harvest and the remainder of the watershed would not be affected by Felix, the “peak/base flows” indicator should be maintained for the watershed.

In addition to the harvest prescription, the size of the proposed harvest should also help to maintain habitat indicators in the watershed. The heavier thinning and regeneration harvest would have longer-term effects on the harvest units, but a relatively small amount of acreage is involved (72 acres of regeneration harvest, and 181 acres of heavy thinning). The 253 acres where long-term reduction in canopy will occur, however, are less than 0.3% of the nearly 104,000 acres of Federal forest land which exists in the Middle North Umpqua watershed. Of this total area, about 70% will be protected as LSR or Congressionally Withdrawn (North Umpqua River corridor). In addition, a minimum of 22% of the remaining Matrix land will be protected as RR (the actual proportion of RR in the watershed is actually substantially higher, because much of the RR protecting intermittent streams has not been incorporated into the database [personal communication, Scott Lightcap, fishery biologist, North Umpqua R.D., 11/30/98]). Therefore, despite Felix and other timber sales that will likely be proposed during the next decade on Federal land, approximately three-quarters of the Federal forest land in the watershed (and all of the RR-- the most important portion, from an anadromous fish viewpoint) will be protected from non-restorative activities. If relatively small amounts of timber harvest, etc. are proposed for non-reserved lands, these actions should not retard the recovery of the watershed as a whole.

Based on the EA and ACS Consistency Review for the proposed Felix timber sale in the Middle North Umpqua watershed, it appears that all of the relevant S&Gs would be observed. Compliance with the nine ACS objectives is also adequately described by the UNF.

Little River watershed. Withrow is proposed for the Little River watershed, which is a non-Key Watershed under the NFP. For this action, the UNF determined that all of the habitat indicators would be maintained at the watershed scale, despite the project-level “degrade” which was recorded in the Cavitt Creek and Upper Cavitt Creek sixth field HUC. As noted under the Jackson Creek watershed, above, the “sediment/turbidity” indicator was thought to be degraded due to harvest and road-related actions such as stormproofing and decommissioning. In the long-term and on the watershed scale, however, this “degrade” was not thought to be consequential, because of its short-term and highly localized nature. Proper stormproofing, in fact, is likely to diminish the adverse effects of roads by allowing the drainage design features to work properly. Decommissioning should be an even more beneficial action.

As noted under the project-level discussion for Wildcat, the majority of commercial thinning should have no long-term effect on canopy cover, and therefore, no long-term effect on hydrologic recovery. The heavier thinning proposed on about 35 acres of the nearly 132,000 acre watershed (less than 0.03%) would not affect hydrologic recovery as much as a regeneration harvest, but even if all canopy cover were to be removed on the 35 acres, the hydrologic effect of the harvest on the watershed should be minimal. This is because of the relatively small area to be harvested, and because the proportion of the Little River watershed that is fully hydrologically recovered is expected to grow to 86% in the next decade from the current 76% (BLM 1998). During the next decade, other timber sales on Federal land will be proposed, but a minimum of 25% of the Federal forest land in the Little River watershed will be protected as RR (the actual proportion of RR in the watershed is actually substantially higher, because much of the RR protecting intermittent streams has not been incorporated into the database). Because at least a quarter of the Federal forest land in the watershed (the most important portion, from an anadromous fish viewpoint) will be protected from non-restorative activities, if relatively small amounts of regeneration harvest, etc. are proposed for non-RR lands, these actions should not retard the recovery of the watershed as a whole.

Based on the EA and ACS Consistency Review for the proposed Withrow timber sale in the Little River watershed, it appears that all of the relevant S&Gs would be observed. Compliance with the nine ACS objectives would also likely be achieved.

Effects Summary. NMFS has considered the applicability of these analyses to each of the actions identified in the BA and in this letter. The NMFS is not aware of any other special characteristics of the particular sales that would cause greater or materially different effects on the subject salmonid species and their habitat than is discussed in these references. Similarly, NMFS is not aware of any newly available information that would materially change these previous effects analyses. In that portions of all of the watersheds discussed in this Opinion are privately-owned, the NMFS assumes that the cumulative effects of non-Federal land management practices will continue at similar intensities as in recent years (LRMP/RMP Opinion, pg. 41-42, NMFS 1997b).

The effects of the actions on UR cutthroat and its habitat are presented in the BA prepared by the UNF, specifically in the project and watershed-level MPIs, BEs, ACS Consistency Reviews, and EAs. NMFS finds those descriptions to be adequate for this analysis. Based on this information, the NMFS does not consider these actions to be likely to result in more effects than expected or considered in the LRMP/RMP Opinion (1997b). In particular, the UNF determined, and the NMFS concurred, that relevant NFP S&Gs would be followed and that ACS objectives would be met at the watershed scale and over the long-term when the effects of the proposed timber sales are combined with the environmental baseline. This ACS consistency determination was made because the UNF showed that, despite the potential short-term adverse effects of their proposed actions, watershed habitat indicators would be maintained or restored over the long-term.

The NMFS expects that ACS objectives which may be affected by the subject actions will be met for the following reasons: (1) potential sediment input from the small amount of proposed temporary, semi-permanent, and permanent road construction will be minimized by implementation of appropriate mitigation measures and temporary, semi-permanent, and permanent roads would not occur in RR; (2) potential sediment input from proposed road repair, upgrade, inactivation, obliteration, decommissioning, resurfacing, reconstruction, and stormproofing will be minimized by implementation of appropriate Best Management Practices (specific procedures that minimize the adverse environmental effects of activities) and the long-term effects of these actions should be beneficial because of lessened sediment and hydrologic effects from existing and former roads; (3) underburning in RRs in Withrow should reduce the risk of catastrophic fire and may also accelerate attainment of large trees to serve as a future source of large woody debris for streams in the sale area (otherwise, no vegetation treatments or timber harvest will occur in RR); (4) the ground compacting activity (partial suspension and tractor yarding) will be mitigated through ripping and water-barring of skid trails and none of the hauling and yarding activity will occur in RR; and (5) the amount of canopy cover removed in the timber sales would be small compared to the passive restoration which will occur in the watersheds over the long-term and should not impair recovery of the watersheds. Despite the minor, short-term adverse effects, these actions maintain or restore essential habitat functions and will not impede recovery of salmonid habitat, which is a long-term goal of the NFP.

Section 7(a)(2) Determinations

The NMFS concludes that, when the effects of these proposed site specific actions are added to the environmental baseline and cumulative effects occurring in the relevant action areas, they are not likely to jeopardize the continued existence of UR cutthroat trout, OC coho salmon, or OC steelhead trout.

Additionally, the NMFS concludes that the proposed actions would not cause adverse modification or destruction of UR cutthroat critical habitat. This is because our “no jeopardy” conclusion is based on the effects of the actions on UR cutthroat habitat and because the “adverse modification or destruction of habitat” standard is defined similarly to the “jeopardy” standard. Because we have determined that the actions would not jeopardize the continued existence of UR cutthroat, it follows that UR cutthroat would not be adversely modified or destroyed.

In reaching these conclusions, NMFS has utilized the best scientific and commercial data available as documented herein and by the BA and documents incorporated by reference.

Incidental Take Statement

Effects resulting from timber sale and road-related activities are expected to be the sources of incidental take associated with the proposed timber sales covered by this Opinion. Because of the implementation of appropriate mitigation measures for these activities, sediment impacts are expected to be minimized.

Adverse effects of management actions such as these are largely unquantifiable in the short-term, and may not be measurable as long-term effects on the species' habitat or population levels. Therefore, even though the NMFS expects some low level of incidental take to occur due to these actions, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species themselves.


The incidental take statement in the LRMP/RMP Opinion (NMFS 1997b) provided reasonable and prudent measures and terms and conditions to avoid or minimize the take of listed salmonids from beneficial road-related actions (pages 64 and 70) that may be applied to site-specific actions, if appropriate. NMFS hereby applies the findings, reasonable and prudent measures, and terms and conditions set forth in the Incidental Take Statement of the programmatic LRMP/RMP Opinion (NMFS 1997b) to the relevant site-specific actions.

Conclusions

This concludes formal consultation on these actions in accordance with 50 CFR 402.14(b)(1). The UNF must reinitiate this ESA consultation if: (1) the amount or extent of taking specified in the incidental take statement above, is exceeded; (2) new information reveals effects of the action that may affect listed species in a way not previously considered; (3) the action is modified in a manner that causes an effect to the listed species that was not previously considered; or (4) a new species is listed or critical habitat designated that may be affected by identified action.

If you have any questions, please contact Dan Kenney of my staff at (541) 957-3385.

Sincerely,

A handwritten signature in black ink, appearing to read "William Stelle, Jr.", with a stylized flourish at the end.

William Stelle, Jr.
Regional Administrator

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